

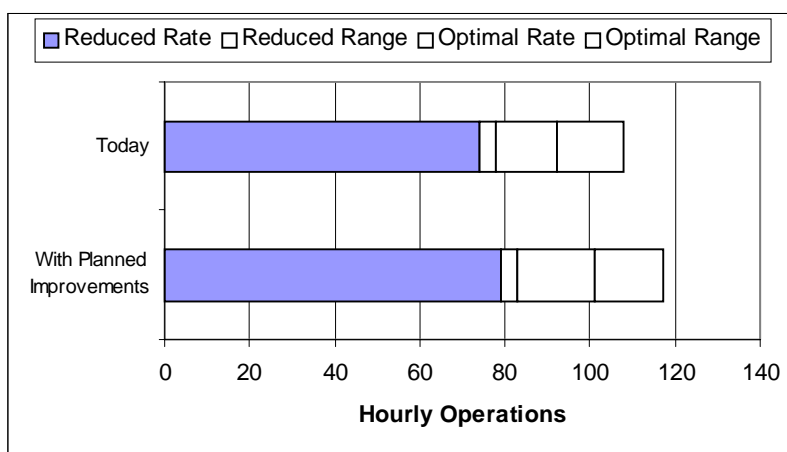
## Newark International Airport Benchmarks

- The current capacity benchmark at Newark is 92-108 flights per hour in good weather.
- Current capacity falls to 74-78 flights (or fewer) per hour in adverse weather conditions, which may include poor visibility, unfavorable winds or heavy precipitation.
- Newark operates close to its good-weather capacity for about three hours of the day, but these traffic rates cannot be sustained in adverse weather.
- In 2000, Newark had the second highest rate of delays in the country. Over 8% of all flights at Newark experienced significant levels of delay (more than 15 minutes).
- In adverse weather, scheduled traffic exceeds capacity 7 ½ hours of the day.
- On good weather days, about 6% of the flights are delayed significantly (more than 15 minutes).
- On adverse weather days, about 18% of the flights are delayed significantly (more than 15 minutes).
- Technology and procedural improvements are expected to improve Newark's capacity benchmark by 10% (101-117 flights per hour) over the next 10 years, while the adverse weather capacity benchmark will increase by 7% (79-83 flights per hour).
- These capacity increases could be brought about as a result of:
  - ADS-B/CDTI (with LAAS), which provides a cockpit display of the location of other aircraft and will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes, which allow a more consistent flow of aircraft to the runway.
- Demand at Newark is projected to grow by 20% over the next decade. The imbalance between capacity and demand growth is expected to increase delays.

## Airport Capacity Benchmarks – These values are for total operations achievable under specific conditions:

- **Optimum Rate** – Visual Approaches (VAPS), unlimited ceiling and visibility
- **Reduced Rate** – Most commonly used instrument configuration, below visual approach minima

Scenario	Optimum Rate	Reduced Rate
Today	92-108	74-78
New Runway	N/A	N/A
With planned improvements	101-117	79-83



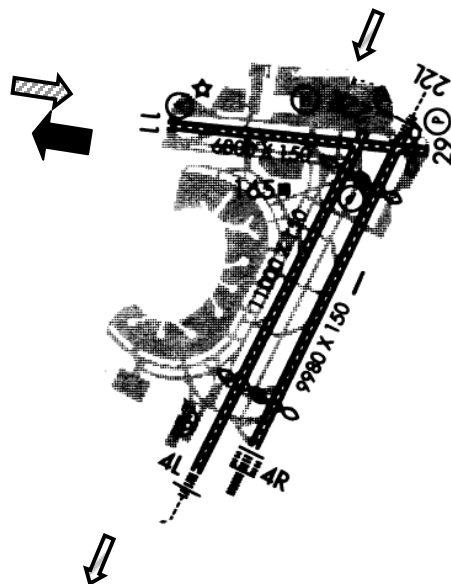
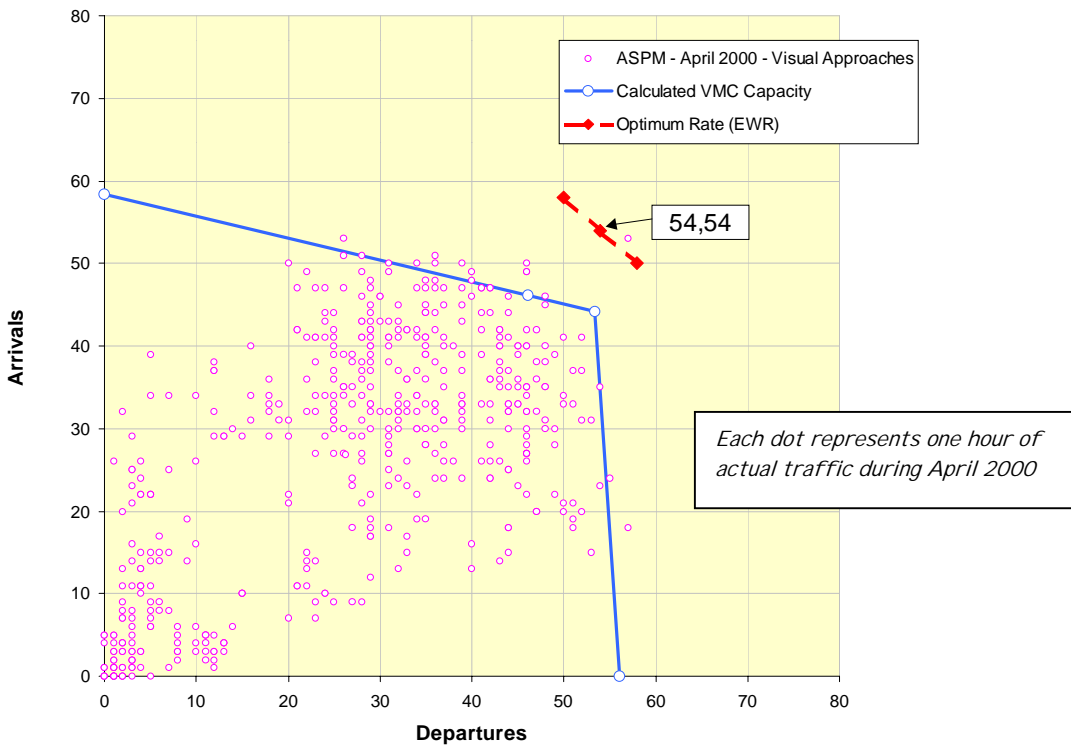
- The benchmarks describe an achievable level of performance for the given conditions, which can occasionally be exceeded. Lower rates can be expected under adverse conditions. Note: In some cases, facilities provided separate unbalanced maximum arrival and departure rates.
- Planned Improvements include:
  - ADS-B/CDTI (with LAAS) – provides a cockpit display of the location of other aircraft. This will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes – allows more consistent delivery of aircraft to the runway threshold.
- Benefits from Planned Improvements assume that all required infrastructure and regulatory approvals will be in place. This includes aircraft equipage, airspace design, environmental reviews, frequencies, training, etc. as needed.
- **Note:** These benchmarks do not consider any limitation on airport traffic flow that may be caused by non-runway constraints at the airport or elsewhere in the NAS. Such constraints may include:
  - Taxiway and gate congestion, runway crossings, slot controls, construction activity
  - Terminal airspace, especially limited departure headings
  - Traffic flow restrictions caused by en route miles-in-trail restrictions, weather or congestion problems at other airports

*These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the individual programs.*

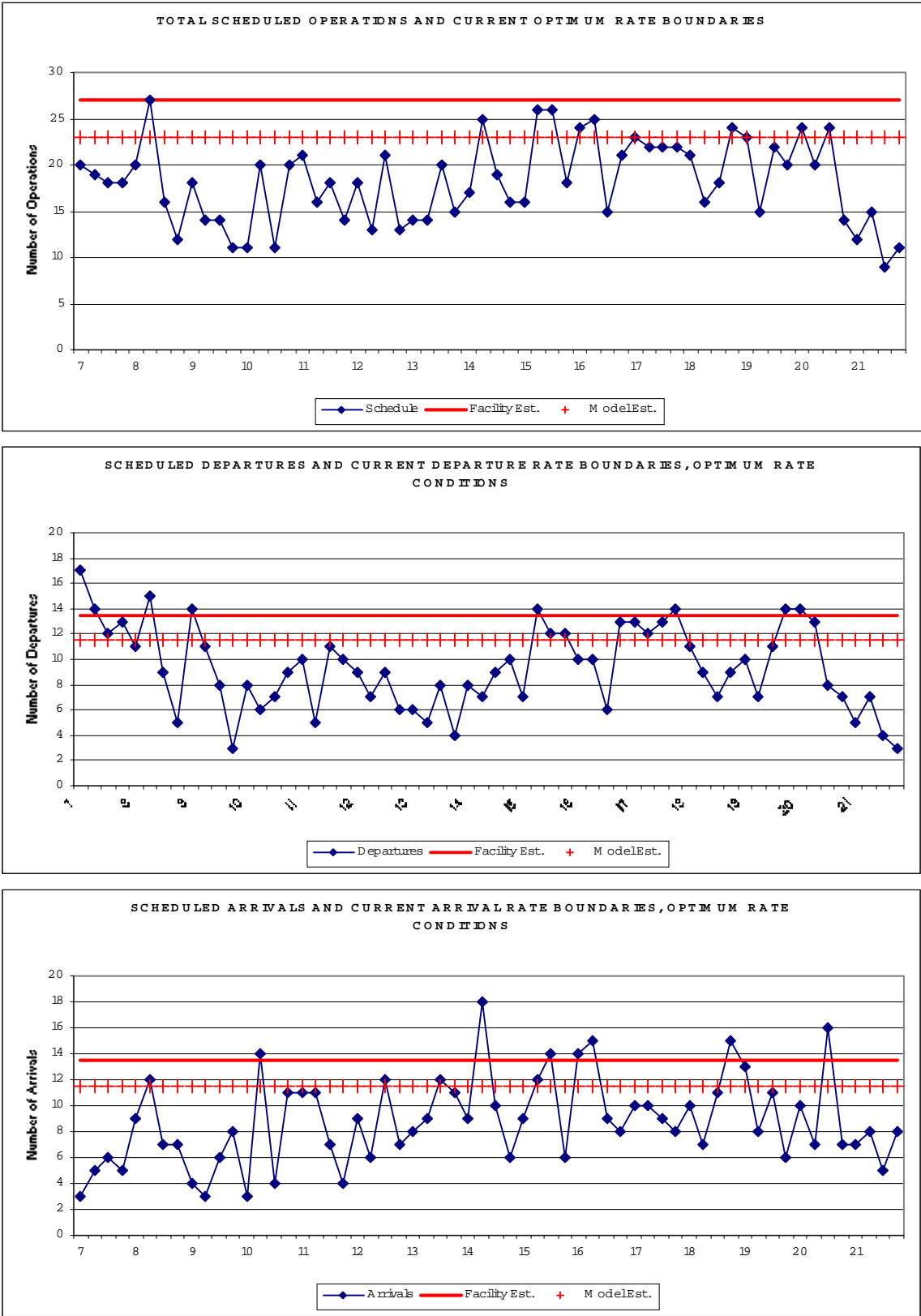
**The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.**

## Current Operations – Optimum Rate

- Visual approaches, visual separation – Optimum Rate of (58,50) or (50,58) with a balanced rate of (54,54) was reported by the facility
  - Arrive 22L, and as traffic permits, on 11, while aircraft Depart 22R with alternate departures on 29
- ASPM data are actual hourly traffic counts for the month of April 2000 for Visual Approach conditions. These data include other runway configurations and off-peak periods.
- Solid line represents the airport capacity during a busy hour calculated by the FAA Airport Capacity Model, showing the tradeoff between arrival and departure rates
- The capacity model can only approximate the complex operations at EWR

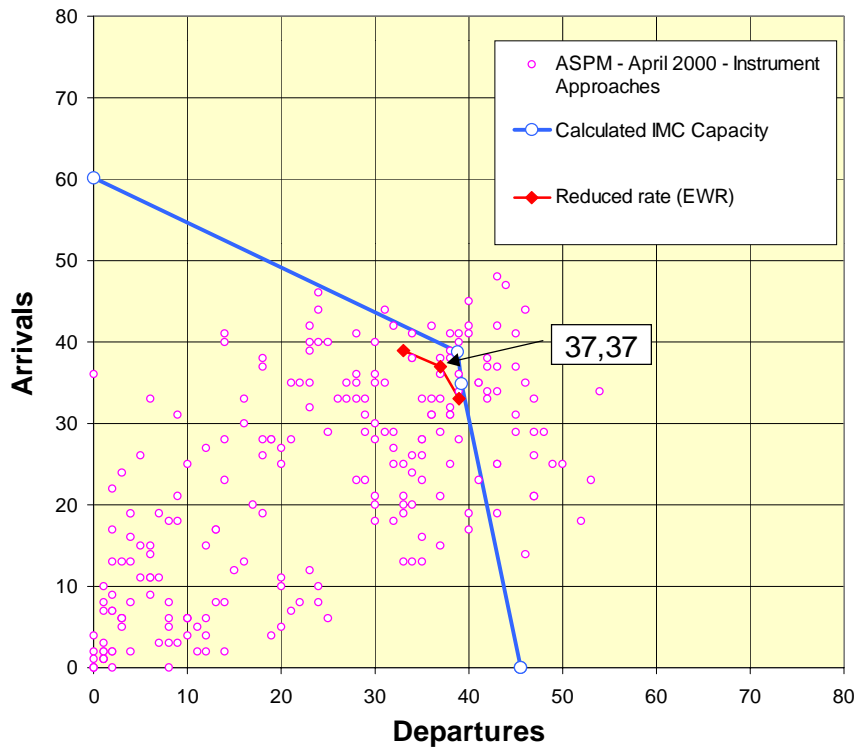


Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Optimum Rate Conditions



## Current Operations – Reduced Rate

- Instrument approaches (below Visual Approach Minima)
  - Arrive 4R, Depart 4L
- Reduced Rate of (39,33) or (33,39) and a balanced rate of (37,37) was reported by the facility
- ASPM data for “Instrument Approaches” can include marginal VFR, with higher acceptance rates
- Chart below represents observed traffic and expected rates in terms of operations per hour



## Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Reduced Rate Conditions

